

initially negotiating a first type of codec for communication between the telephone devices;

15 using a first type of codec for transferring the packets of information between the two telephone devices through the packet switching network;

renegotiating the use of a second type of codec;

switching to using said second type of codec upon detection of degradation in the quality of the voice information during the course of the telephone connection; and

20 upon further detection of degradation in the quality of the voice information, repeatedly renegotiating to dynamically change compression techniques to adjust for network usage thereby optimizing the use of network capacity and throughput.

REMARKS

Claim 17 is amended, as recited hereinabove. Claims 1-20 remain pending in the subject application.

Claims 1-13 and 17-19 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Vargo et al. (U.S. Patent No. 6,356,545) in view of Blomfield-Brown et al. (U.S. Patent No. 6,292,840). Hereinafter, referred to as Vargo and Blomfield-Brown.

On page 3 of the Final Office Action, it is noted that Vargo discloses beginning with a particular algorithm, the TrueSpeech codec, and then selecting a different algorithm, the Voxware, after noticing dropped packets. This is however, not the claimed subject matter of either claim 1 or 17, as is recited in the language of claim 1, "wherein the type of codec being utilized is repeatedly renegotiated to dynamically change compression techniques ... thereby optimizing the use of network capacity and throughput ..." and similarly in claim 17. Vargo does not teach, disclose or suggest the latter. In Vargo, while a seemingly one-time selection is made from a TruSpeech codec to a Voxware type codec once dropped packets are noticed, there is no repeated renegotiation of the compression technique to optimize the use of network capacity and throughput, as in the claimed invention.

A one time selection of a different type of codec from the one being employed is certainly not a repeated renegotiation of the compression technique and indeed does not

optimize the use of network capacity and throughput throughout the conversation. When environmental conditions are continuously changing, i.e. an unacceptable amount of delay in packet arrival is noted every so often or packets are dropped not just at a particular time but on an on-going basis resulting in repeated negotiation of compression techniques or the user requests a different codec on a repeated basis, as in the present invention. Vargo does not appear to address optimization of the use of network capacity and throughput by repeated renegotiation of the compression technique. It is thus believed that independent claims 1 and 17 are patentable over Vargo in view of Blomfield-Brown and all claims depending therefrom are therefore necessarily patentable over Vargo in view of Blomfield-Brown.

The combination of Vargo and Blomfield-Brown is objected thereto for reasons stated in the response/amendment of January 29, 2003.

With respect to claims 2-4, it is stated on page 5 of the office action, that "switching initiated by a user and predetermined code are well known in the art such as a TV remote controller, wherein a user can select different channels to view and wherein the remote controller can be programmed to store a number of channels with associated 'hot keys'". However, codec switching, initiated by a user inputting code via a telephone, as in the present invention, is not that of a user remotely changing the channels of a television set. That is, in the present invention, a user detects voice degradation of voice quality and then enters a code associated with a particular type of codec, which signifies, to the router, that the codec need be renegotiated. The code is transmitted using Dual Tone Mode Frequency. The router then switches to the codec of the user's choosing if the latter is commonly supported by the router device and the remotely-located router device. This is hardly the same as controlling a TV remote to switch between channels.

Claims 14-16 and 20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. (U.S. Patent No. 6,483,600) in view of Blomfield-Brown (U.S. Patent No. 5,625,678). Hereinafter, referred to as Schuster et al. and Blomfield-Brown et al.

Schuster et al. does not teach or disclose transmission of both voice and fax signals, as claimed in the amended claim 14. For example, Schuster et al. does not teach "a DSP module for carrying a user-initiated telephone conversation ..." In fact, system 10 of Schuster et al. is a "data network facsimile system" and no disclosure is found of the combination of voice and

fax. Blomfield-Brown et al. discloses a method and system for allowing multiple application programs to communicate in the context of a switched voice and data communication (see Blomfield-Brown et al.: Abstract). This is not the teachings of the claimed invention as the latter is a "router device for use in a communication system ..."

The combination of Schuster et al. and Blomfield-Brown et al. is objected thereto as there is no teaching, suggestion or hint of one by the other.

It is therefore believed that claim 14, as amended, is patentable over Schuster et al. in view of Blomfield-Brown et al. Claims 15 and 16 depending from claim 14 and claim 20 depending from claim 17 are believed to be patentable. Reconsideration and allowance of claims 14-16 is hereby requested.

As it is believed that claims 1-20 are patentable over the cited prior art, reconsideration and allowance of the same is hereby respectfully requested.

Applicants submit that the application is now in condition for allowance and an early notice thereof is requested. Should any further amendment be required prior to passing the

application to issue, the Examiner is respectfully invited to contact the undersigned by telephone at the number set out below.

Respectfully submitted,

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I hereby certify that this correspondence with all attachments is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on May 2, 2003 by Erika Villafana.

May 2, 2003



Erika Villafana

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

The following claims have been amended:

- 1 17. (Three Times Amended) A method for use in a communication system having at least two
2 telephone devices in communications with each other for transferring voice information
3 therebetween through a packet switching network, the router device being coupled between
4 one of the telephone devices and the packet switching network and for performing one of a
5 plurality of types of compression/decompression (codec) operation on information being
6 transferred between the telephone devices comprising:
- 7 receiving an analog telephone signal through a telephone connection from one of the
8 telephone devices;
- 9 converting the analog telephone signal to a digital telephone signal;
- 10 separating information carried on the digital telephone signal into packets of
11 information;
- 12 initially negotiating a first type of codec for communication between the telephone
13 devices;
- 14 using a first type of codec for transferring the packets of information between the two
15 telephone devices through the packet switching network;
- 16 renegotiating the use of a second type of codec; [and]
- 17 switching to using said second type of codec upon detection of degradation in the
18 quality of the voice information during the course of the telephone connection; and
- 19 upon further detection of degradation in the quality of the voice information,
20 repeatedly renegotiating to dynamically change compression techniques to adjust for network
21 usage thereby optimizing the use of network capacity and throughput.